

Table 7. Energy Consumption Estimates by Source, Selected Years, 1960-2000, Michigan

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum											Nuclear Electric Power	Hydro-electric Power <sup>e</sup>	Wood and Waste <sup>a</sup>	Other <sup>a,f</sup>	Net Interstate Flow of Electricity/Losses <sup>g</sup>	Total <sup>h</sup>
			Asphalt & Road Oil <sup>a</sup>	Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a,c</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,d</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels											Million kWh		Other <sup>a,f</sup>	Million kWh	Total <sup>h</sup>	
1960	R 25,930	370	2,936	1,312	30,235	3,369	4,072	2,827	2,497	65,782	11,840	4,051	128,920	0	3,280	—	—	9,080	—
1965	R 33,132	556	2,264	2,619	30,287	4,377	5,880	3,716	3,025	78,044	8,594	8,077	146,882	181	1,400	—	—	11,513	—
1970	R 34,065	809	3,881	718	38,141	7,365	3,124	6,202	3,157	96,831	10,056	9,775	179,250	375	1,303	—	—	12,620	—
1975	R 31,198	884	3,886	347	42,170	5,776	1,349	7,475	2,751	108,255	18,291	10,245	200,545	7,176	1,430	—	—	4,840	—
1980	R 31,110	865	3,507	488	27,643	6,646	1,233	6,736	3,274	97,025	13,289	17,512	177,353	15,891	6,885	—	—	-13,005	—
1985	R 32,793	709	2,779	201	25,411	6,570	507	14,225	2,979	93,447	3,109	8,260	157,487	13,452	1,388	—	—	R 21,851	—
1990	R 34,817	817	3,950	215	23,312	10,057	270	14,901	3,352	99,913	2,750	10,434	169,153	21,611	R i 932	—	—	R 27,717	—
1991	R 34,086	828	3,464	206	24,978	10,234	360	16,017	2,999	101,375	1,750	12,699	174,082	27,021	R 1,004	—	—	R -16,042	—
1992	R 31,781	891	3,546	182	25,311	10,125	251	16,666	3,057	101,370	1,706	13,552	175,766	18,849	R 1,071	—	—	R 14,655	—
1993	R 32,445	913	4,453	198	28,719	10,305	452	13,077	3,113	105,003	2,094	13,452	180,867	28,525	R 2,895	—	—	R -13,548	—
1994	R 35,902	926	3,596	237	29,347	10,281	415	14,287	3,254	105,744	2,188	13,717	183,067	14,144	R 5,784	—	—	R 9,724	—
1995	R 36,037	971	4,955	231	29,118	8,818	366	14,497	3,198	110,546	1,610	13,153	186,493	24,448	R 4,903	—	—	R -5,365	—
1996	R 36,924	1,015	3,703	215	29,502	9,045	421	18,306	3,104	110,520	1,787	15,697	192,297	26,829	R 2,455	—	—	R 1,884	—
1997	R 36,118	980	7,777	197	30,999	9,483	354	14,524	3,279	112,389	1,564	16,752	197,319	21,914	R 2,910	—	—	R 22,040	—
1998	R 38,316	843	6,488	167	30,651	9,025	387	13,108	3,432	114,913	2,144	16,886	197,201	12,494	R 1,803	—	—	R 49,690	—
1999	R 38,510	914	6,669	286	31,760	9,116	694	15,339	3,468	121,027	2,565	16,290	207,214	14,591	1,086	—	—	R 40,243	—
2000	36,532	930	5,866	205	31,580	7,214	437	16,308	3,416	118,160	2,375	15,655	201,214	18,882	1,230	—	—	12,199	—
Trillion Btu																			
1960	R 653.1	383.0	19.5	6.6	176.1	18.2	23.1	11.3	15.1	345.6	74.4	23.9	713.9	0.0	35.3	37.3	0.0	31.0	R 1,853.5
1965	830.2	563.6	15.0	13.2	176.4	24.0	33.3	14.9	18.3	410.0	54.0	45.4	804.7	2.1	14.6	36.9	0.0	39.3	2,291.4
1970	828.9	821.3	25.8	3.6	222.2	41.0	17.7	23.4	19.1	508.7	63.2	54.4	979.1	4.1	13.7	36.4	0.0	43.1	2,726.5
1975	751.0	894.8	25.8	1.7	245.6	32.1	7.6	27.8	16.7	568.7	115.0	57.8	1,098.9	79.0	14.9	35.9	0.0	16.5	2,891.0
1980	759.0	874.7	23.3	2.5	161.0	37.1	7.0	24.7	19.9	509.7	83.6	96.6	965.4	173.3	71.5	87.6	0.0	-44.4	2,887.1
1985	R 781.9	719.9	18.4	1.0	148.0	36.7	2.9	51.3	18.1	490.9	19.5	45.6	832.4	R 142.9	14.5	95.4	0.0	R 44.6	R 2,661.5
1990	R 788.8	835.4	26.2	1.1	135.8	56.6	1.5	54.0	20.3	524.8	17.3	57.8	895.4	R 228.7	R 19.7	R 84.6	i 0.8	R 94.6	R 2,824.3
1991	R 764.9	844.2	23.0	1.0	145.5	57.5	2.0	57.9	18.2	532.5	11.0	70.2	918.8	R 283.3	R 10.5	R 83.3	0.9	R -54.7	R 2,845.7
1992	R 707.5	909.0	23.5	0.9	147.4	57.0	1.4	60.4	18.5	532.5	10.7	74.4	926.9	R 197.4	R 11.1	R 85.8	0.9	50.0	R 2,885.5
1993	R 713.8	932.2	29.6	1.0	167.3	58.1	2.6	47.2	18.9	551.6	13.2	73.9	963.2	R 299.6	R 29.8	R 78.1	1.0	R -46.2	R 2,976.5
1994	R 799.7	945.5	23.9	1.2	170.9	58.2	2.4	51.9	19.7	553.0	13.8	75.3	970.3	R 147.8	R 59.7	R 81.7	1.0	R 33.2	R 3,059.2
1995	R 786.8	987.4	32.9	1.2	169.6	50.0	2.1	52.5	19.4	576.5	10.1	72.2	986.5	R 256.9	R 50.6	R 86.8	1.1	R -18.3	R 3,155.4
1996	R 795.0	1,026.7	24.6	1.1	171.8	51.3	2.4	66.1	18.8	576.5	11.2	85.6	1,009.5	R 281.8	R 25.4	R 97.8	1.2	R 6.4	R 3,248.0
1997	R 780.2	995.4	51.6	1.0	180.6	53.8	2.0	52.5	19.9	585.9	9.8	91.8	1,048.9	R 230.0	R 29.7	R 85.9	1.2	R 75.2	R 3,238.8
1998	R 826.6	860.3	43.1	0.8	178.5	51.2	2.2	47.4	20.8	598.9	13.5	92.5	1,048.9	R 131.1	R 18.4	R 83.9	1.3	R 169.5	R 3,110.7
1999	R 829.9	930.2	44.3	1.4	185.0	51.7	3.9	55.5	21.0	630.7	16.1	88.3	1,097.9	R 152.5	R 11.1	R 84.9	1.4	R 137.3	R 3,237.3
2000	779.3	950.2	38.9	1.0	184.0	40.9	2.5	58.8	20.7	615.6	14.9	84.6	1,062.0	196.9	12.5	90.0	1.4	41.6	3,121.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the technical Notes for each type of energy.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Liquefied petroleum gases.

<sup>d</sup> "Other" is the subtotal of 16 petroleum products consumed in the industrial sector. See a full description in the Technical Notes, Section 4, "Other Petroleum Products."

<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.

<sup>f</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Section 5 of the Technical Notes for an explanation of estimation methodology.

<sup>g</sup> Net interstate flow of electricity is the difference between the amount of energy in the electricity sold within a State (including associated losses) and the energy input at the electric utilities within the State. A positive number indicates

that more electricity (including associated losses) came into the State during the year; conversely, a negative number indicates that more electricity (including associated losses) went out of the State than came into the State.

<sup>h</sup> From 1989, "Total" does not equal the sum of the columns. Net imports of electricity generated from nonrenewable energy sources (shown in the Technical Notes Table TN8) is included in the total but not in any other columns.

<sup>i</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

kWh=Kilowatthours. R=Revised data. —=Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the Technical Notes.

Table 8. Residential Energy Consumption Estimates, Selected Years, 1960-2000, Michigan

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum				Wood <sup>a</sup>	Geothermal	Solar <sup>d</sup>	Electricity <sup>a</sup>	Electrical System Energy Losses <sup>e</sup>	Total
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a,c</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Thousand Cords	Geothermal	Solar <sup>d</sup>	Million Kilowatthours	Net Energy	Million Kilowatthours
1960	R 1,414	202	17,380	765	1,940	20,084	1,103	—	—	8,728	—	21,709
1965	R 1,007	271	16,334	1,279	2,346	19,959	890	—	—	11,309	—	27,002
1970	R 481	340	18,839	545	4,493	23,877	829	—	—	17,103	—	41,446
1975	R 119	335	19,420	302	5,219	24,942	796	—	—	20,886	—	50,380
1980	R 65	387	9,195	83	3,375	12,653	1,972	—	—	22,260	—	54,129
1985	R 51	341	5,964	425	4,427	10,817	1,950	—	—	22,302	—	R 52,189
1990	R 48	327	4,167	217	6,538	10,922	1,373	—	—	25,319	—	R 55,232
1991	R 42	337	4,558	279	7,248	12,085	1,447	—	—	26,760	—	R 57,726
1992	R 32	358	4,232	205	7,331	11,767	1,522	—	—	25,671	—	R 54,399
1993	R 40	370	4,149	355	7,976	12,480	779	—	—	26,770	—	R 56,244
1994	R 44	365	4,032	322	7,896	12,250	764	—	—	27,174	—	R 56,319
1995	R 33	380	4,123	233	8,015	12,370	847	—	—	28,623	—	R 59,393
1996	R 32	400	3,912	230	10,758	14,900	846	—	—	28,901	—	R 60,009
1997	R 21	380	3,879	254	10,166	14,299	503	—	—	28,726	—	R 59,391
1998	R 16	320	2,613	272	9,500	12,385	R 455	—	—	29,808	—	R 61,202
1999	R 2	351	2,727	606	10,763	14,096	R 487	—	—	30,661	—	R 59,627
2000	2	366	2,859	364	11,080	14,303	510	—	—	30,707	—	52,649
<b>Trillion Btu</b>												
1960	R 35.0	209.0	101.2	4.3	7.8	113.4	22.1	0.0	0.0	29.8	R 409.2	74.1
1965	R 24.8	274.8	95.1	7.3	9.4	111.8	17.8	0.0	0.0	38.6	R 467.8	92.1
1970	R 11.4	345.1	109.7	3.1	17.0	129.8	16.6	0.0	0.0	58.4	R 561.3	141.4
1975	R 2.8	343.0	113.1	1.7	19.4	134.2	15.9	0.0	0.0	71.3	R 567.2	171.9
1980	R 1.6	394.9	53.6	0.5	12.4	66.4	39.4	0.0	0.0	76.0	R 578.3	184.7
1985	R 1.2	348.9	34.7	2.4	16.0	53.1	39.0	0.0	0.0	76.1	R 518.3	R 178.1
1990	R 1.2	342.2	24.3	1.2	23.7	49.2	27.5	f 0.6	f 0.2	86.4	R f 507.2	R 188.5
1991	R 1.1	350.2	26.5	1.6	26.2	54.3	28.9	0.6	0.2	91.3	R 526.7	R 197.0
1992	R 0.8	371.5	24.7	1.2	26.6	52.4	30.4	0.7	0.2	87.6	R 543.6	R 185.6
1993	R 1.0	382.6	24.2	2.0	28.8	54.9	15.6	0.7	0.2	91.3	R 546.4	R 191.9
1994	R 1.1	376.8	23.5	1.8	28.7	54.0	15.3	0.7	0.3	92.7	R 540.8	R 192.2
1995	R 0.8	396.0	24.0	1.3	29.0	54.4	16.9	0.7	0.3	97.7	R 566.7	R 202.6
1996	R 0.8	414.0	22.8	1.3	38.9	63.0	16.9	0.8	0.3	98.6	R 594.3	R 204.7
1997	R 0.5	395.3	22.6	1.4	36.8	60.8	10.1	0.8	0.3	98.0	R 565.8	R 202.6
1998	R 0.4	335.4	15.2	1.5	34.3	51.1	R 9.1	0.8	0.3	101.7	R 498.8	R 208.8
1999	R 0.1	365.6	15.9	3.4	38.9	58.2	R 9.7	0.9	0.3	104.6	R 539.4	R 203.4
2000	(s)	379.3	16.7	2.1	40.0	58.7	10.2	0.9	0.3	104.8	554.2	179.6
												733.9

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the Technical Notes for each type of energy.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Liquefied petroleum gases.

<sup>d</sup> Includes small amounts of solar thermal and photovoltaic energy consumed by the commercial sector that cannot be separately identified. See Section 5 of the the Technical Notes for an explanation of estimation methodology.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for

electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the Technical Notes.

Table 9. Commercial Energy Consumption Estimates, Selected Years, 1960-2000, Michigan

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum						Wood <sup>a</sup>	Electricity <sup>a</sup>	Electrical System Energy Losses <sup>d</sup>	Total <sup>e</sup>		
			Distillate Fuel <sup>a</sup>	Kerosene <sup>a</sup>	LPG <sup>a,c</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels						Thousand Cords	Geothermal	Million Kilowatthours	Net Energy	Million Kilowatthours	
1960	R 982	43	3,212	566	342	324	1,175	5,619	21	—	6,381	—	15,872	—
1965	R 760	85	3,019	946	414	536	839	5,754	17	—	9,124	—	21,785	—
1970	R 378	133	3,482	403	793	804	558	6,040	16	—	13,021	—	31,553	—
1975	R 279	182	3,589	224	921	954	390	6,078	15	—	14,596	—	35,207	—
1980	R 243	190	3,123	15	596	823	225	4,781	47	—	16,765	—	40,767	—
1985	R 202	158	2,359	11	781	699	274	4,126	52	—	18,421	—	R 43,108	—
1990	R 220	159	1,730	18	1,154	770	72	3,744	R 91	—	21,986	—	R 47,962	—
1991	R 222	166	1,938	17	1,279	586	5	3,825	R 97	—	22,748	—	R 49,072	—
1992	R 157	174	1,767	5	1,294	553	12	3,631	R 104	—	22,508	—	R 47,698	—
1993	R 197	180	1,472	25	1,407	77	8	2,990	R 65	—	30,242	—	R 63,537	—
1994	R 247	183	1,437	33	1,393	363	3	3,229	R 66	—	31,264	—	R 64,796	—
1995	R 221	194	1,770	102	1,414	77	5	3,369	R 66	—	32,153	—	R 66,718	—
1996	R 238	201	1,790	149	1,899	77	5	3,920	R 72	—	32,896	—	R 68,302	—
1997	R 168	192	2,030	56	1,794	76	57	4,012	R 58	—	33,231	—	R 68,703	—
1998	R 129	163	1,483	66	1,676	208	2	3,435	R 57	—	34,710	—	R 71,268	—
1999	R 18	179	1,276	37	1,899	171	3	3,387	R 62	—	36,040	—	R 70,088	—
2000	12	186	1,553	34	1,955	159	6	3,707	63	—	36,793	—	63,083	—
<b>Trillion Btu</b>														
1960	R 24.3	44.5	18.7	3.2	1.4	1.7	7.4	32.4	0.4	0.0	21.8	R 123.4	54.2	R 177.6
1965	R 18.7	86.0	17.6	5.4	1.7	2.8	5.3	32.7	0.3	0.0	31.1	R 168.9	74.3	R 243.2
1970	R 9.0	134.7	20.3	2.3	3.0	4.2	3.5	33.3	0.3	0.0	44.4	R 221.7	107.7	R 329.4
1975	R 6.5	186.4	20.9	1.3	3.4	5.0	2.4	33.1	0.3	0.0	49.8	R 276.0	120.1	R 396.2
1980	R 5.9	194.0	18.2	0.1	2.2	4.3	1.4	26.2	0.9	0.0	57.2	R 284.3	139.1	R 423.4
1985	R 5.0	161.4	13.7	0.1	2.8	3.7	1.7	22.0	1.0	0.0	62.9	R 252.3	R 147.1	R 399.3
1990	R 5.4	166.6	10.1	0.1	4.2	4.0	0.5	18.9	R 1.8	f 0.0	75.0	f 267.8	R 163.6	f 431.4
1991	R 5.5	172.0	11.3	0.1	4.6	3.1	(s)	19.1	R 1.9	0.0	77.6	R 276.1	R 167.4	R 443.6
1992	R 3.9	180.3	10.3	(s)	4.7	2.9	0.1	18.0	R 2.1	0.0	76.8	R 281.1	R 162.7	R 443.8
1993	R 4.9	186.5	8.6	0.1	5.1	0.4	0.1	14.2	1.3	0.0	103.2	R 310.1	R 216.8	R 526.8
1994	R 6.0	189.2	8.4	0.2	5.1	1.9	(s)	15.5	1.3	0.1	106.7	R 318.8	R 221.1	R 539.9
1995	R 5.4	202.2	10.3	0.6	5.1	0.4	(s)	16.4	1.3	0.1	109.7	R 335.2	R 227.6	R 562.9
1996	R 5.9	208.7	10.4	0.8	6.9	0.4	(s)	18.6	1.4	0.1	112.2	R 347.0	R 233.0	R 580.0
1997	R 4.1	200.1	11.8	0.3	6.5	0.4	0.4	19.4	R 1.2	0.2	113.4	R 338.3	R 234.4	R 572.7
1998	R 3.2	171.4	8.6	0.4	6.1	1.1	(s)	16.2	1.1	0.2	118.4	R 310.5	R 243.2	R 553.7
1999	R 0.4	186.9	7.4	0.2	6.9	0.9	(s)	15.4	R 1.2	0.2	123.0	327.2	R 239.1	R 566.4
2000	0.3	193.0	9.0	0.2	7.1	0.8	(s)	17.2	1.3	0.2	125.5	337.5	215.2	552.7

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the Technical Notes for each type of energy.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Liquefied petroleum gases.

<sup>d</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>e</sup> Small amounts of solar thermal and photovoltaic energy consumed in the commercial sector cannot be separately identified and are included in residential consumption.

<sup>f</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the Technical Notes.

Table 10. Industrial Energy Consumption Estimates, Selected Years, 1960-2000, Michigan

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum										Hydro-electric Power <sup>a</sup>	Wood and Waste <sup>a</sup>	Other <sup>a,d</sup>	Total	Million kWh	Electricity <sup>a</sup>	Net Energy	Electrical System Energy Losses <sup>f</sup>	
			Asphalt and Road Oil <sup>a</sup>	Distillate Fuel <sup>a</sup>	Kero-sene <sup>a</sup>	LPG <sup>a,c</sup>	Lubri-cants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Other <sup>a,d</sup>	Total	Million kWh									
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels											Other <sup>a,e</sup>	Total	Million kWh	Million kWh	Million kWh	Million kWh	Million kWh	Total
1960	13,011	117	2,936	7,091	2,741	524	1,221	3,151	9,574	4,051	31,288	212	—	—	12,482	—	31,046	—	—	—	
1965	15,193	192	2,264	7,518	3,655	923	1,898	2,694	6,660	8,077	33,689	146	—	—	19,350	—	46,201	—	—	—	
1970	13,061	262	3,881	8,502	2,175	854	1,834	2,758	4,557	9,775	34,336	123	—	—	25,169	—	60,992	—	—	—	
1975	9,885	300	3,886	8,749	823	1,239	1,430	1,889	3,343	10,245	31,603	121	—	—	28,866	—	69,627	—	—	—	
1980	8,652	249	3,507	4,804	1,135	2,637	1,796	967	3,213	17,512	35,572	117	—	—	30,656	—	74,545	—	—	—	
1985	6,645	190	2,779	4,246	70	8,725	1,635	1,192	2,213	8,260	29,121	117	—	—	33,704	—	R 78,871	—	—	—	
1990	R 4,823	290	3,950	3,406	34	6,926	1,839	976	10,434	29,001	R g 112	—	—	—	35,062	—	R 76,487	—	—	—	
1991	R 3,925	282	3,464	4,576	64	7,228	1,646	1,111	751	12,699	31,538	R 76	—	—	35,007	—	R 75,517	—	—	—	
1992	R 3,353	313	3,546	4,628	41	7,791	1,678	950	763	13,552	32,948	R 135	—	—	35,657	—	R 75,561	—	—	—	
1993	R 3,459	320	4,453	4,487	72	3,420	1,708	1,034	965	13,452	29,591	R 122	—	—	30,572	—	R 64,230	—	—	—	
1994	R 4,505	338	3,596	4,729	60	4,528	1,786	1,166	972	13,717	30,554	R 124	—	—	32,717	—	R 67,807	—	—	—	
1995	R 4,618	336	4,955	3,736	32	4,826	1,755	1,310	408	13,153	30,175	R 111	—	—	33,921	—	R 70,385	—	—	—	
1996	R 4,478	356	3,703	3,943	42	5,425	1,703	1,418	422	15,694	32,349	R 123	—	—	34,499	—	R 71,632	—	—	—	
1997	R 4,001	351	7,777	4,223	44	2,361	1,799	1,271	423	16,752	34,651	R 120	—	—	35,430	—	R 73,250	—	—	—	
1998	R 4,150	291	6,488	4,060	50	1,127	1,883	1,097	425	16,783	31,913	R 115	—	—	35,983	—	R 73,882	—	—	—	
1999	R 4,875	310	6,669	4,470	51	2,323	1,903	1,017	399	16,225	33,058	91	—	—	37,276	—	R 72,490	—	—	—	
2000	3,474	308	5,866	3,995	39	3,006	1,875	1,060	628	15,646	32,114	100	—	—	37,268	—	63,897	—	—	—	
<b>Trillion Btu</b>																					
1960	332.0	121.3	19.5	41.3	15.5	2.1	7.4	16.5	60.2	23.9	186.5	2.3	14.8	0.0	42.6	699.4	105.9	805.3			
1965	385.6	195.1	15.0	43.8	20.7	3.7	11.5	14.2	41.9	45.4	196.2	1.5	18.8	0.0	66.0	863.2	157.6	1,020.8			
1970	320.9	265.7	25.8	49.5	12.3	3.2	11.1	14.5	28.7	54.4	199.5	1.3	19.5	0.0	85.9	892.8	208.1	1,100.9			
1975	246.7	307.7	25.8	51.0	4.7	4.6	8.7	9.9	21.0	57.8	183.5	1.3	19.7	0.0	98.5	857.4	237.6	1,094.9			
1980	219.4	253.7	23.3	28.0	6.4	9.7	10.9	5.1	20.2	96.6	200.2	1.2	47.2	0.0	104.6	826.3	254.3	1,080.7			
1985	169.9	194.2	18.4	24.7	0.4	31.4	9.9	6.3	13.9	45.6	150.7	1.2	55.3	0.0	115.0	686.3	R 269.1	R 955.4			
1990	R 120.4	302.8	26.2	19.8	0.2	25.1	11.2	5.1	9.0	57.8	154.4	R g 1.2	R 55.3	119.6	R g 753.8	R 261.0	R 9,014.7				
1991	R 97.5	292.5	23.0	26.7	0.4	26.1	10.0	5.8	4.7	70.2	166.8	R 0.8	R 52.4	0.0	119.4	R 729.5	R 257.7	R 987.1			
1992	R 81.8	324.4	23.5	27.0	0.2	28.2	10.2	5.0	4.8	74.4	173.3	R 1.4	R 53.2	0.0	121.7	R 755.8	R 257.8	R 1,013.7			
1993	R 83.9	331.3	29.6	26.1	0.4	12.3	10.4	5.4	6.1	73.9	164.2	R 1.3	R 61.2	0.0	104.3	R 746.1	R 219.2	R 965.3			
1994	R 112.9	348.9	23.9	27.5	0.3	16.5	10.8	6.1	6.1	75.3	166.6	R 1.3	R 65.1	0.0	111.6	R 806.4	R 231.4	R 1,037.7			
1995	R 115.0	350.2	32.9	21.8	0.2	17.5	10.6	6.8	2.6	72.2	164.6	R 1.1	R 68.5	0.0	115.7	R 815.2	R 240.2	R 1,055.4			
1996	R 112.4	368.4	24.6	23.0	0.2	19.6	10.3	7.4	2.7	85.6	173.3	R 1.3	R 79.4	0.0	117.7	R 852.5	R 244.4	R 1,096.9			
1997	R 100.8	364.8	51.6	24.6	0.3	8.5	10.9	6.6	2.7	91.8	197.0	R 1.2	R 74.7	0.0	120.9	R 859.4	R 249.9	R 1,109.4			
1998	R 104.2	305.6	43.1	23.6	0.3	4.1	11.4	5.7	2.7	91.9	182.8	R 1.2	R 73.6	0.0	122.8	R 790.2	R 252.1	R 1,042.2			
1999	R 124.4	323.3	44.3	26.0	0.3	8.4	11.5	5.3	2.5	87.9	186.2	0.9	R 73.9	0.0	127.2	R 836.0	R 247.3	R 1,083.3			
2000	90.2	319.6	38.9	23.3	0.2	10.8	11.4	5.5	3.9	84.6	178.6	1.0	78.5	0.0	127.2	795.2	218.0	1,013.2			

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the Technical Notes for each type of energy.

<sup>b</sup> Includes supplemental gaseous fuels.

<sup>c</sup> Liquefied petroleum gases.

<sup>d</sup> "Other" is the subtotal of 16 petroleum products. See a full description in Section 4 of the Technical Notes "Other Petroleum Products."

<sup>e</sup> "Other" is geothermal, wind, photovoltaic, and solar thermal energy. See Section 5 of the Technical Notes for an explanation of estimation methodology.

<sup>f</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for electrical system energy losses.

<sup>g</sup> There is a discontinuity in this time series between 1988 and 1989 due to the expanded coverage of renewable energy sources beginning in 1989.

R=Revised data.

kWh=Kilowatthours. —=Not applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the Technical Notes.

Table 11. Transportation Energy Consumption Estimates, Selected Years, 1960-2000, Michigan

Year	Coal <sup>a</sup>	Natural Gas <sup>b</sup>	Petroleum								Ethanol <sup>d</sup>	Electricity <sup>a</sup>	Electrical System Energy Losses <sup>e</sup>	Total <sup>d</sup>	
			Aviation Gasoline <sup>a</sup>	Distillate Fuel <sup>a</sup>	Jet Fuel <sup>a</sup>	LPG <sup>a,c</sup>	Lubricants <sup>a</sup>	Motor Gasoline	Residual Fuel <sup>a</sup>	Total					
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels								Thousand Barrels	Million Kilowatthours	Net Energy	Million Kilowatthours	
1960	R 223	3	1,312	2,475	3,369	21	1,277	62,307	728	71,489	0	9	—	23	—
1965	50	5	2,619	3,348	4,377	34	1,126	74,814	779	87,097	0	0	—	0	—
1970	21	10	718	6,353	7,365	62	1,324	93,269	427	109,518	0	0	—	0	—
1975	2	10	347	8,949	5,700	95	1,321	105,412	423	122,248	0	0	—	0	—
1980	0	12	488	9,741	6,646	128	1,477	95,235	232	113,946	0	0	—	0	—
1985	0	11	201	12,196	6,570	291	1,344	91,556	99	112,256	f 1,032	0	—	0	—
1990	0	18	215	13,670	10,057	283	1,513	98,167	93	123,997	1,205	0	—	0	—
1991	0	20	206	13,620	10,234	262	1,353	99,679	50	125,403	1,582	5	—	10	—
1992	0	22	182	14,391	10,125	251	1,380	99,868	98	126,294	1,367	4	—	9	—
1993	0	24	198	18,269	10,305	275	1,405	103,892	74	134,418	1,609	5	—	11	—
1994	0	23	237	18,831	10,281	470	1,468	104,215	98	135,601	1,859	5	—	10	—
1995	0	25	231	19,082	8,818	241	1,443	109,159	95	139,070	1,219	4	—	9	—
1996	0	26	215	19,567	9,045	224	1,401	109,025	125	139,600	514	5	—	R 10	—
1997	0	24	197	20,560	9,483	204	1,480	111,042	53	143,018	654	4	—	R 8	—
1998	0	21	167	22,038	9,025	804	1,549	113,608	87	147,277	845	5	—	10	—
1999	0	22	286	22,788	9,116	352	1,565	119,839	43	153,989	956	4	—	7	—
2000	0	26	205	22,808	7,214	266	1,542	116,941	58	149,034	2,267	4	—	8	—
Trillion Btu															
1960	R 5.5	2.7	6.6	14.4	18.2	0.1	7.7	327.3	4.6	378.9	0.0	(s)	R 387.2	0.1	R 387.3
1965	1.2	4.6	13.2	19.5	24.0	0.1	6.8	393.0	4.9	461.5	0.0	0.0	467.4	0.0	467.4
1970	0.5	10.5	3.6	37.0	41.0	0.2	8.0	489.9	2.7	582.5	0.0	0.0	593.5	0.0	593.5
1975	(s)	10.5	1.7	52.1	31.6	0.4	8.0	553.7	2.7	650.3	0.0	0.0	660.8	0.0	660.8
1980	0.0	12.6	2.5	56.7	37.1	0.5	9.0	500.3	1.5	607.5	0.0	0.0	620.1	0.0	620.1
1985	0.0	10.8	1.0	71.0	36.7	1.0	8.2	480.9	0.6	599.5	f 3.7	0.0	f 610.3	0.0	f 610.3
1990	0.0	18.7	1.1	79.6	56.6	1.0	9.2	515.7	0.6	663.7	4.3	0.0	682.5	0.0	682.5
1991	0.0	20.3	1.0	79.3	57.5	0.9	8.2	523.6	0.3	670.9	5.6	(s)	691.3	(s)	691.3
1992	0.0	22.5	0.9	83.8	57.0	0.9	8.4	524.6	0.6	676.2	4.8	(s)	698.8	(s)	698.8
1993	0.0	24.7	1.0	106.4	58.1	1.0	8.5	545.7	0.5	721.3	5.7	(s)	746.0	(s)	746.1
1994	0.0	23.3	1.2	109.7	58.2	1.7	8.9	545.0	0.6	725.3	6.6	(s)	748.6	(s)	748.7
1995	0.0	25.9	1.2	111.2	50.0	0.9	8.8	569.3	0.6	741.8	4.3	(s)	767.7	(s)	767.8
1996	0.0	26.9	1.1	114.0	51.3	0.8	8.5	568.7	0.8	745.1	1.8	(s)	772.0	(s)	772.0
1997	0.0	24.8	1.0	119.8	53.8	0.7	9.0	578.9	0.3	763.4	2.3	(s)	788.2	(s)	788.3
1998	0.0	21.8	0.8	128.4	51.2	2.9	9.4	592.1	0.5	785.4	3.0	(s)	807.2	(s)	807.2
1999	0.0	23.3	1.4	132.7	51.7	1.3	9.5	624.5	0.3	821.4	3.4	(s)	844.7	(s)	844.8
2000	0.0	27.4	1.0	132.9	40.9	1.0	9.3	609.3	0.4	794.7	8.0	(s)	822.1	(s)	822.1

<sup>a</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the Technical Notes for each type of energy.

<sup>b</sup> Includes supplemental gaseous fuels. Transportation use of natural gas is gas consumed in the operation of pipelines, primarily in compressors, and, since 1990, is also gas consumed as vehicle fuel.

<sup>c</sup> Liquefied petroleum gases.

<sup>d</sup> Ethanol blended into motor gasoline, which is accounted for under motor gasoline, is shown separately here to display the use of renewable energy by the transportation sector and is included only once in the total.

<sup>e</sup> Incurred in the generation, transmission, and distribution of electricity plus plant use and unaccounted for

electrical system energy losses.

<sup>f</sup> There is a discontinuity in this time series between 1980 and 1981 due to the expanded coverage of renewable energy sources beginning in 1981.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the Technical Notes.

Table 12. Estimates of Energy Input at Electric Utilities, Selected Years, 1960-2000, Michigan

Year	Coal	Natural Gas <sup>a</sup>	Petroleum				Nuclear Electric Power	Hydroelectric Power <sup>e</sup>	Wood and Waste	Geothermal Energy	Other <sup>b,f</sup>	Total <sup>g</sup>
			Residual Fuel <sup>b,c</sup>	Distillate Fuel <sup>b,d</sup>	Petroleum Coke <sup>b</sup>	Total						
	Thousand Short Tons	Billion Cubic Feet	Thousand Barrels				Million Kilowatthours					
1960	10,300	5	362	77	0	440	0	3,067	0	0	0	—
1965	16,123	3	316	68	0	384	181	1,254	0	0	0	—
1970	20,124	64	4,514	965	0	5,479	375	1,181	0	0	0	—
1975	20,914	57	14,136	1,538	0	15,674	7,176	1,309	0	0	0	—
1980	22,150	26	9,621	780	0	10,400	15,891	6,768	0	0	0	—
1985	25,896	10	522	646	0	1,168	13,452	1,272	0	0	0	—
1990	29,726	23	1,149	339	0	1,488	21,611	821	0	0	0	—
1991	29,896	24	944	286	0	1,230	27,021	928	0	0	0	—
1992	28,238	25	833	292	0	1,125	18,849	936	0	0	0	—
1993	28,749	19	1,047	341	0	1,388	28,525	2,772	0	0	0	—
1994	31,106	18	1,114	319	0	1,433	14,144	5,660	0	0	0	—
1995	31,165	36	1,101	408	0	1,509	24,448	4,792	0	0	0	—
1996	32,175	32	1,235	289	3	1,527	26,829	2,332	0	0	0	—
1997	31,928	33	1,031	308	0	1,339	21,914	2,790	0	0	0	—
1998	34,021	48	1,630	457	103	2,190	12,494	1,688	0	0	0	—
1999	33,615	51	2,120	499	65	2,684	14,591	995	0	0	0	—
2000	33,044	44	1,683	365	9	2,057	18,882	1,130	0	0	0	—
<b>Trillion Btu</b>												
1960	256.3	5.4	2.3	0.5	0.0	2.7	0.0	33.0	0.0	0.0	0.0	297.4
1965	399.9	3.0	2.0	0.4	0.0	2.4	2.1	13.1	0.0	0.0	0.0	420.6
1970	487.0	65.2	28.4	5.6	0.0	34.0	4.1	12.4	0.0	0.0	0.0	602.8
1975	494.9	47.3	88.9	8.9	0.0	97.8	79.0	13.6	0.0	0.0	0.0	732.6
1980	532.2	19.4	60.5	4.5	0.0	65.0	173.3	70.3	0.0	0.0	0.0	860.3
1985	605.8	4.7	3.3	3.8	0.0	7.0	R 142.9	13.3	0.0	0.0	0.0	R 773.6
1990	661.8	5.2	7.2	2.0	0.0	9.2	R 228.7	8.5	0.0	0.0	0.0	R 799.5
1991	660.8	9.2	5.9	1.7	0.0	7.6	R 283.3	9.7	0.0	0.0	0.0	R 965.2
1992	621.0	10.3	5.2	1.7	0.0	6.9	R 197.4	9.7	0.0	0.0	0.0	R 842.3
1993	624.0	7.2	6.6	2.0	0.0	8.6	R 299.6	28.6	0.0	0.0	0.0	R 973.0
1994	679.7	7.3	7.0	1.9	0.0	8.9	R 147.8	58.4	0.0	0.0	0.0	R 922.5
1995	665.5	13.1	6.9	2.4	0.0	9.3	R 256.9	49.4	0.0	0.0	0.0	R 1,011.9
1996	675.9	8.8	7.8	1.7	(s)	9.5	R 281.8	24.1	0.0	0.0	0.0	R 1,004.4
1997	674.7	10.3	6.5	1.8	0.0	8.3	R 230.0	R 28.5	0.0	0.0	0.0	R 944.1
1998	718.7	26.2	10.2	2.7	0.6	13.5	R 131.1	R 17.2	0.0	0.0	0.0	R 877.5
1999	705.0	31.1	13.3	2.9	0.4	16.6	R 152.5	R 10.2	0.0	0.0	0.0	R 907.4
2000	688.8	30.9	10.6	2.1	0.1	12.8	196.9	11.5	0.0	0.0	0.0	928.8

<sup>a</sup> Includes supplemental gaseous fuels.<sup>b</sup> The continuity of these data series estimates may be affected by changing data sources and estimation methodologies. See the Technical Notes for each type of energy.<sup>c</sup> Prior to 1980, based on oil used in steam plants. Since 1980, residual fuel includes fuel oil nos. 4, 5, and 6 and residual fuel oils.<sup>d</sup> Prior to 1980, based on oil used in internal combustion and gas turbine engine plants. Since 1980, distillate fuel includes fuel oil nos. 1 and 2, kerosene, and jet fuel.<sup>e</sup> If applicable, through 1988, includes all net imports of electricity, and, from 1989, includes only the portion of imports of electricity that is derived from hydroelectric power.<sup>f</sup> "Other" is electricity generated for distribution from wind, photovoltaic, and solar thermal energy.<sup>g</sup> If applicable, from 1989, includes net imports of electricity generated from nonrenewable energy sources not shown in other columns. See data in Table TN8 in the Technical Notes.

R=Revised data.

—=Not applicable.

(s)=Btu value less than 0.05 and physical unit value less than 0.5.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Data sources, estimation procedures, and assumptions are described in the Technical Notes.